

VIRGINIA WILDLIFE

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Fred. Everett '55



Commission photo by Kesteloo

A winter snow gives a sparkle to Christmas.

VIRGINIA WILDLIFE

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A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia

COMMONWEALTH OF VIRGINIA



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Cover

The wild turkey (*Meleagris gallopavo silvestris*) is Virginia's largest upland game bird. It has been part of the heritage of Virginia since the time of Captain John Smith. Artist Fred Everett's four-color painting is as colorful as the bright Christmas season.

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THE CALL OF THE NORTHERN BUSH

WE dispense this month with our usual type of editorial to describe, on the lighter side, our hunting tactics and adventures in the wilds of northern Ontario. Your editor, like many Virginia outdoorsmen is an advocate of still hunting or stalking and has long dreamed of doing such hunting in the dark country of the Canadian "bush." When opportunity arose to make such a trip, the invitation was too good to pass up.

Let it be said at the outset that this was no official business trip but a personally-planned, personally-financed vacation jaunt of long-standing, involving as nice a bunch of hunters bent on stalking their game as you could ever hope to find. Congeniality always helps for it is in the company of good comrades from whence stems much of the pleasures of hunting and fishing.

There were eight of us besides myself: Dave Weiner and Bill Gore of Marshall, Va.; Sedg Watson of Healing Springs; Ken Ludlam and Art Semmig of NBC, Washington, D. C.; Burt Munhall of Bel Air, Md.; "Doc" Skinner of Spenceer, N. C.; and Pete Brown of Phoenix, Ariz.

Our destination was the Westree Section of north-central Ontario, approximately 100 miles north of Sudbury. We left our cars at Capreol, the last possible road terminus before taking the "Mixer" (local way freight train of the Canadian National) to Milepost 59 at Stupart. Fred Thomson, local train conductor and "good will" ambassador of the North greeted us at Capreol and took over the task of orienting us to the country.

"Boys," he said, "you're going into wild country. Be careful. The area around Stupart was logged and burned over some 50 years ago and the new birch and spruce growth is very thick. It is what we call 'dirty,' but you'll like it. Half of your gang is already in camp and they'll be waiting for you to come up on the "Mixer" tomorrow. You'll spend the night here, load in the morning and get up to camp in the afternoon. I'll be checking with you frequently to see if there's anything you need."

Fred was right. Stupart was a lonely outpost. No roads, only two trails, and a 3-man section gang on the railroad as our only other company. For miles around, uninhabited wilderness and lakes greeted us. "This," said Dave on our arrival, "is Journey's End. Make yourselves comfortable. You can stalk your moose, bear, deer, wolves, grouse, waterfowl, and you can fish for northernns to your heart's content. Camp's yours—both camps—and the Crown's land is your hunting land—400,000 acres and 400,000 lakes of it."

We did not tarry long. Everyone chipped in to lend a hand around camp and to shorten the time between hunts—and fishing jaunts—in the back country. Our pulses quickened when Doc related seeing a cow moose only a few hours before the season opened. "Her bristles stood right up on end like hair on a cat's back," he said, "but I wouldn't shoot. I want my game legal."

Game was fair, to moderate, to good, depending on what you were after. The first week there was little small game hunting as everyone concentrated on either moose, bear or deer. Grouse were plentiful and so unaccustomed to humans that they could be killed with a stick. We kept the sauce pan full by shooting off their heads on our way back to camp in the evening.

Though the long promised fish chowder was never made by Ken we got our fill of beautifully-fried great northern pike. Deuschane's Lake near camp, where

Dave maintained an outboard, and Donneganna Lake 3 miles away by trail, where we had a canoe, literally teemed with northernns—some going to the 10-20 pound class. We caught plenty of fish, but it was rough on Dave's supply of tackle.

Ontario is lake and fish country. Bob Dickson, district forester for the Gogama district and a great guy, told me that they were naming new lakes every day. "Gosh only knows how many hundred thousand we have."

On a visit to his office, which was another 30 miles north, he briefed me on the country. "You're in fair moose country. Not the best but reasonably good. Last year they took 103 moose out of Gogama, which is north of where you are. It's a lot of hunting, though, and going's tough."

He wasn't kidding. We soon found it out. Lots and lots of still hunting but little shooting—for moose that is.

It took us several days to locate the fresh feeding grounds of the moose. It was in impossible country—bogs and lakes and blowdown of the roughest kind. Several days later Dave and I paddled up Donneganna and toof off across the "black growth" for Lupus Lake 7 miles away. There we ran into the only other party of hunters in the surrounding bush—a five-man team of Canadians from Capreol. A 1100 lb. bull put in an appearance on Lupus and Walter Dines drilled it with a 30-30. For the next two snowy days five moose hunters sweated back-packing moose meat out of Lupus while Dave and I, with only a few light pounds of moose meat, thanked our lucky stars we went *mooseless*.

Days later Doc and I checked the kill scene for bear or wolf sign but nothing touched the discarded remains save whiskey jacks (Canada jays). Doc wanted motion pictures so I helped pose a sequence for him. The stomach of the moose was so huge I could barely roll it over with two hands.

After the first week we ran out of fresh meat and thence dined on grouse, pike, snowshoe hares, and moose gullion. It was rugged—but, as they say in the north country, "we weren't complaining."

Waterfowl were plentiful, especially bluebills, mergansers and blue geese, and if one was to seriously hunt them instead of big game, it would be nothing to keep the larder full.

The wolves were the most intriguing aspect of our Ontario trip. The country is overrun with them and their well-beaten tracks close to the lakes were everywhere in evidence. At night their howls sent shivers up our spines. The feeling is that the wolves are responsible for the scarcity of deer. Pete and Sedg and Bert actually called up one big 150 lb. brute using a wolf call and cornered it on a small peninsula, but it slipped away following a brief encounter with a double blast of Sedg's number sixes. Earlier I had also sent a 30-06 whistle pill at one that was seen speeding away at 200 yards along the railroad tracks.

Our story doesn't end here for when half our party departed for the States, the other half pushed by air and boat deeper into the wilds of the Paudash Lake country, still bent on moose and bear. At this writing we have not heard from them but will report on their success next month.

Any takers for the wolf country? The "Mixer" leaves Capreol every other day at 9:30.

— J. J. S.

Cripples Don't Count

By L. C. PAYNE

*Professor Veterinary Physiology
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“THE best chance I had all week was on a six-point buck standing in a clearing about 30 yards away. I carefully aimed for the heart and pulled the trigger. I'd have bet a million that he was hit, but as soon as I fired, he bounded away into the brush and I lost him.” Or, “I'll even bet I lost half of the pheasants I hit last fall just because they started to run as soon as they hit the ground, or they hid where I could not find them.”

As we lounge around under the shade of a picnic tree discussing the hunting days of seasons past, it may be well to look into some of the functions of the animal body. Especially of the game we are trying to bring home. How can some of the “odd” reactions of wounded game be explained?

The fundamental function or action of any living animal is to remain alive. Most animals will flee from their predators and even the wounded will attempt to slip away and hide, hoping that they may recover. The hunter and the conservationist talk about shooting game dead, hitting the vital centers to make certain that the game is not wasted. If we can explain some of the reactions of the body by examining the functioning of these vital centers, perhaps we can better explain the actions of wounded game.

The animal body is made up of a group of systems, all functioning towards the common cause of keeping the animal alive and healthy. Some of these systems are the nervous system, circulatory system (heart and blood vessels), muscular system and skeletal system, along with others equally important.

As great as the importance of these systems is, however, they are not in their entirety essential for life. The more we study the body, the more we are impressed with the minimal amount of tissue that is really essential for life.

The function of the nervous system is that of conduction. Stimuli arising around the animal create impulses within the body which in turn pass to the brain, and in this manner inform the animal of its surroundings. The nervous system is also concerned with conducting impulses from the brain to the muscles so that the animal may move when it wants to. This conducting system acts to coordinate the body as a unit, and in this manner it keeps the processes of the animal organized.

The nervous system consists of the brain, spinal cord, and the peripheral nerves which pass out from the cord. Of course, only a small portion which connects the brain with the spinal cord is absolutely essential for life. This part is termed the “medulla oblongata.” At the present time, portions of the forebrain in humans are de-



Make your first shot count. A well placed shot in a vital area is the best insurance against losing crippled game.



A good bird dog makes hunting more pleasant and is a conservation measure. Not many crippled birds are lost when you hunt with a good dog.

stroyed or removed by surgeons in attempts to correct mental disturbances. You may recall the story which appeared in many newspapers last year about the headless rooster which lived for several days. In attempting to kill this bird, only the upper part of the head including the anterior part of the brain was removed, and yet the bird lived until "killed" again. Likewise, the loss of the spinal cord will cause a complete paralysis of the body yet the animal will survive. Destruction of any of the peripheral nerves causes only a loss of function of that part of the body which they supply.

Let us consider the "brain shot" which is often discussed. Besides the fact that the brain in most animals offers a small and constantly moving target, it does not insure immediate death to the animal. A bullet which creases the side of the head but does not injure the brain may stun the animal, but will not kill it. Neither will a shot which enters a part of the brain, but does not destroy all of it. Such animals may be blinded, stunned, or lack proper muscle coordination for a time, but they retain the ability to move and sometimes run. Many times this is just enough to elude the hunter. Well then, how about shooting into the "medulla oblongata" and destroying the vital centers of the animal? This would be perfect, if the animal would hold still long enough in an open area while you lined your gun sights and fired. But here again, the smallness of the area and the moving target complicate the shot. "Maybe you could paralyze the limbs by destroying part of the spinal cord." Yes, this is a very worthwhile suggestion. The so-called "neck shot" produces a very paralyzing effect. If the impulses from the brain to the muscles of the legs can be stopped, the legs cannot function as they should and even though the animal may not be dead, it certainly cannot walk or run. If a bullet prevents any part of the spinal cord from functioning normally the part of the body which that part of the spinal cord supplies (muscles of the leg, for instance) is functionless. "Well," you say to yourself, "he has convinced me. I will shoot for the neck or the spinal

cord." On your next hunting trip you try this with the following results: The animal suddenly falls after being hit. You assure yourself it cannot move, so you light a cigarette, call to your pals, and start to bleed or dress the animal. About this time, the animal scares the life out of you by leaping to its feet and racing off through the timber. You begin to curse. An illustration of this appeared in the papers not long ago. A hunter shot a large deer, walked up to it and placing his gun across the antlers, prepared to dress the animal. Suddenly the deer leaped up and raced off, taking the hunter's gun with him. Now there is an explanation for this action also. We said before that if a bullet prevented the spinal cord from functioning normally the animal would be paralyzed. We did not say that the spinal cord was destroyed. The functioning of any nervous tissue may be prevented merely by mechanical compression of the tissue. A high velocity missile may cause all of the symptoms of complete destruction without having even touched the cord. Such cases as these were classified during the last war as "spinal concussion" cases. The energy which is transmitted to the tissue surrounding the path of the bullet is imparted radially to the trajectory of the bullet, and this compression may cause a momentary loss of function. For example, a bullet traveling 1,000 feet per second may traverse the entire spinal canal without touching the spinal cord and yet cause no apparent loss of function or damage. However, a bullet of the same size which travels at a rate of 4,000 feet per second through the same course within the spinal canal may cause complete loss of function of the cord, still without apparent damage. The pressure waves created by the more rapidly moving bullet distorts the surrounding tissue and in this manner prevents the tissue from functioning normally. This loss of function may disappear within a few minutes and even though the animal has been hit, the nerves will function in the normal fashion again, and it may escape.

The degree of radial compression imparted by high velocity bullets may affect the muscles of the animal as well as the nervous system. The stunning of frogs, by shooting into the water adjacent to them will prevent any immediate movement of the body. Yet upon examination of the body, no apparent damage can be noted. If left alone for a few minutes the frog will hop into the water. Squirrel hunters often tell of shooting into the bark of the tree, right next to a squirrel, the animal becoming stunned and falling to the ground, again without apparent damage by the bullet.

"All right, all right, what about shooting for the heart?" you may ask. As essential as the heart is for life, it will stand a great deal of abuse. The function of the heart is to pump blood through the body and thereby furnish the necessary oxygen to the tissues. If you stop the heart by destroying it, or the nerves within it, the pumping effect stops immediately. However, the muscle tissue still has enough oxygen for a limited amount of activity. Just as a man preparing to run the 100-yard dash will inhale just before the starting gun is fired and then hold his breath until the race is over, an animal



Ducks and geese have a thick protective covering of feathers. This, in conjunction with the tendency to shoot at waterfowl that are beyond killing range, produces many cripples.

is capable of running several hundred feet after the heart stops beating. Of course, a large amount of blood is lost from the blood vascular system in such a shot, but the muscles can still contract to a limited extent. Hence, it should be imperative that when one is certain that his bullet hit the animal in the heart area, the wounded animal should be tracked down. It can't go too far.

Many times a bullet will pass right through the heavy muscle of the heart and the animal will continue for a great distance. The muscle of the heart and of the chest wall also has the ability to close over such a wound rather quickly, much as a bullet-proof gasoline tanks seals over. This is the case often seen, especially with small bore ammunition and in large game.

From this discussion, it sounds as though the animal will escape no matter where it is hit. Naturally this is not true. The most effective shot for big game is in the shoulder area, where the bullet may paralyze either or both of the front legs, and in this manner prevent the animal from moving very far. Also, the compression effect mentioned above may impair the function of the spinal cord. The base of the heart also lies in this area, and together with the above mentioned effects, the large vessels leaving the heart may be destroyed or at least opened. The paralyzing effect of breaking one or more legs is a great advantage in that the heart will continue to beat for sometime, thus allowing the hunter to open the animal and bleed it out more completely.

Many of the above explanations also hold true for upland game and migratory fowl. The damage caused by small pellets from shotgun shells is many times inadequate to produce immediate death. Yet they do cause enough damage to produce death later. For instance, a cock pheasant is flushed, you wait for the proper range and fire, yet the bird sails off into the blue. Many times if you watch those birds that you are certain you hit, you will see them fall, stone dead, as far away as a quarter of a mile. When they fall, they don't have enough energy to even try and hide. Or, you hit a pheasant, and it immediately begins a long spiraling climb straight up. This may continue for several seconds until the bird is 80 to 100 feet or higher, and then like a falling star, it plummets to earth. Pheasants which have been



Many waterfowl are knocked down but do not count in the day's bag limit because a good retriever is not on hand to bring in the crippled birds.

hit, drop to the ground and begin running as only they can do, only to fall dead in their tracks. The stamina of these birds is amazing. Of course, the numerous broken wings and legs impair the life of the fowl, but many times they recover quickly from these. Pheasants have been killed within the first week of the season which have shown almost complete healing of broken wing bones, or birds are killed with a leg that was broken and healed at an angle.

Many more instances might be cited, but the above few are representative of the average hunting season. As remarkable as the "good" shots we make, is the desire and the ability of the wounded game to survive.

In closing, let me cite a personal illustration experienced while hunting black bear one winter. A large bear was sighted by my companion and when well within range, he fired. As expected, the bear charged directly for the hunter. His first shot had been made at a range of about fifty yards. The second was at a range of thirty-five yards, the third at twenty-five yards and the last one at approximately ten yards. The bear fell only four steps from his feet. Having discussed the above reactions of animals many times, he looked at me and in a somewhat shaky voice said, "I hit every vital spot but the tail."

HOW THE SPORTSMAN'S DOLLAR WAS SPENT

Game Commission Expenditures July 1, 1954 - June 30, 1955

Administration	21 $\frac{1}{4}$ ¢	(\$ 43,528)
Fiscal Division	2 ¢	(\$ 37,554)
Game Division	24 ¢	(\$422,151)
Fish Division	131 $\frac{1}{2}$ ¢	(\$239,200)
Education Division	61 $\frac{1}{2}$ ¢	(\$116,197)
Law Enforcement	41 ¢	(\$719,351)
Capital Outlay	103 $\frac{3}{4}$ ¢	(\$189,929)
Total	\$1.00	\$1,767,913



Duck Shooting in THOSE GOOD OLD DAYS

By HORATIO BIGELOW

IT was a lucky break when my friend Fred came through with an invitation for a day's gunning at his Back Bay ducking club, not far from the Federal Refuge at Ragged Islands. That property had been the scene of many a red letter day back in the nineties when it belonged to a club in which brother and I had a share.

It had been a thrilling sight then to watch the skeins of geese and long lines of ducks headed into the refuge but it was saddening to see how the old flocks of fowl had diminished. At least we had managed limits on black duck, mallard and widgeon. The cook had roasted a Canada goose for us to perfection with a mess of fresh collards from the garden as a side dish, and now we were seated, comfortably relaxed, toasting our shins before a roaring driftwood fire.

With us were two club members of a younger generation. One of them said to me: "Sir, I suppose that in the good old days when you went gunning on Back Bay, all you had to do was to slip down to the edge of the marsh, level your fowling piece, touch her off, and gather in a few bushels of ducks with little trouble and at no expense."

I replied: "Son, that reminds me of an old story from the South Carolina Low Country and here it is to the best of my recollection: Primus Grant had delivered his bale of cotton to the factory, Mr. Ravenel, in Charleston and returned to his tiny farm on John's Island. As Christmas approached, the 'chillen' needed shoes. Amnesia, their mammoth mother, wanted a new dress. Candy, a few oranges and other delicacies must be provided for 'Crisumus Gif.' Primus was up long before day, hitched the scrawny black bull he used for plowing and other farm work onto a dilapidated farm wagon and headed for Charleston.

"It was black dark when he returned. The bull nearly foundered and Primus himself was in little better shape. Amnesia met him with gleaming eyes, avid for cash. When all the tiny Negro could produce was five dirty one dollar bills, there was a 'ruction in the shanty.'

"When Primus, bruised and beaten, finally was able to get in a few words of self defense, he produced a statement from Ravenel and Company, showing that the cost of marketing the cotton nearly equalled the price obtained for his bale. As Primus explained it to his wife: 'Cap'n Ravenel he say, deduc this, deduc that, deduc this and deduc that, so de duc eat um up.'"

This story applies to the high cost of duck shooting, of wild-fowling, even in the good old days when ducks, geese and swan on Back Bay, Currituck and Pamlico Sounds were legion.

Let's look at the record. I think it will convince you that, even in the so-called "good old days," a gunner who wanted good shooting had to work for it and pay for it just as he does today.

Here are a few instances. The two top ducking clubs in the East were the Long Point Club on Lake Erie and the Currituck Club on the Sound of that name. In 1910 I heard, from what I considered reliable sources that two shares of each of these clubs sold for \$25,000. It was necessary to own two shares if you wanted to take a guest with you. Annual dues, assessments and other expenses were in proportion.

You can get some idea of what they amounted to from these figures. The shares in a South Carolina duck club sold for \$5,000 each. That was only the beginning. It cost annually \$500 for ten days gunning, plus wages for your pusher. Then there was an annual assessment of not less than \$1000. To this should be added a suitable stake for the poker game. A friend

told me that he could manage the regular expenses but the poker ante was too steep for him.

At one of the Currituck clubs, the shares cost several thousand dollars. Annual dues were \$300, it cost \$25 a day at the clubhouse, plus a number of other expensive items, not to mention the annual assessment.

Our share in Ragged Islands cost \$1000 in 1895 and was sold for \$1800 in 1906. I don't remember the annual dues or other expenses since a generous Dad took care of them.

Battery shooting on the Susquehanna Flats, off Havre de Grace, cost \$35 a day. That was for two gunners and included meals and quarters in a motor cruiser.

At Ocracoke, on lower Pamlico Sound below Hatteras, battery shooting cost \$10 per day, everything included.

The Pea Island Club on Pamlico Sound furnished the most reasonable wildfowling in my experience. Shares were \$200. Annual dues, \$50. Three dollars per day was charged at the Club and \$1.50 per day for meals. It was tight sledding, but we got by.

Later we reduced the membership from 20 to 10 and you had to turn in two of the old shares for one of the new ones. At the same time we increased the annual dues to \$100. Then we improved the gunning by building a pond one and one-half miles long by one-half mile wide at a cost of \$2500. This we financed with an issue of 10 six percent \$250 bonds, one to each member. We budgeted to retire one bond a year chosen by lot. We also increased the daily charge from \$3 to \$5. When I moved to South Carolina, I sold my share for \$800.

So much for finances and let's get on to gunning. Despite the plethora of fowl, unless weather conditions were favorable, bags were often as small as they usually are today. I have spent a week at Ragged Islands, four gunning days in blue bird weather, and brought home less than a dozen ducks. That was before the era of baiting and live decoys. Two weeks at Pea Island, after a freeze, with steady easterly winds resulted in a total of just eight ducks. We had live decoys then too. At another time, again after a freeze, two guns in two weeks managed only a dozen ducks, though we killed 17 geese one day over some rain puddles on the beach.



Even in the 1890's when the bag limits were high it meant hard work and plenty of discomfort to hunt waterfowl. There were no heated blinds in those days.

Two days on the Susquehanna Flats totalled one of today's limits for two of us. At one of the famous Currituck clubs, the first ten years averaged 17 ducks per gun per day, except for one year with an average of only eight. The next 20 years averaged over 20 a day per gun. At Pea Island the building of the pond upped the average tremendously.

In my experience, the big bags were the result of careful planning and usually of strenuous endeavor. We always helped in putting out and taking up battery rigs. We put out 300 decoys with eight foot cords in Pamlico; up to 900 decoys with 20 foot cords on the Susquehanna Flats. Before the motor era, the battery was lashed athwart a sloop and took plenty of elbow grease to shift it overside and later to get it aboard. Transportation from Manteo on Roanoke Island to Pea Island, 20 long weary miles, consisted of an open motor boat, powered with a four horsepower Mianus engine of ancient vintage. With the thermometer often in the twenties, the carburetor freezing, an icy chop spraying us from head to foot and the boat continually grounding in the shallow sound, which meant jumping overboard to pull it off, we certainly earned what we got. The record day for one gun—73 redheads and 14 brant—called for rising at 3 a. m. to gulp down a hasty cup of Java, a trip such as I have described of over 20 miles through narrow, shallow sloughs which traversed the shoals, and return to the clubhouse through the black dark, well refrigerated and barely able to move.

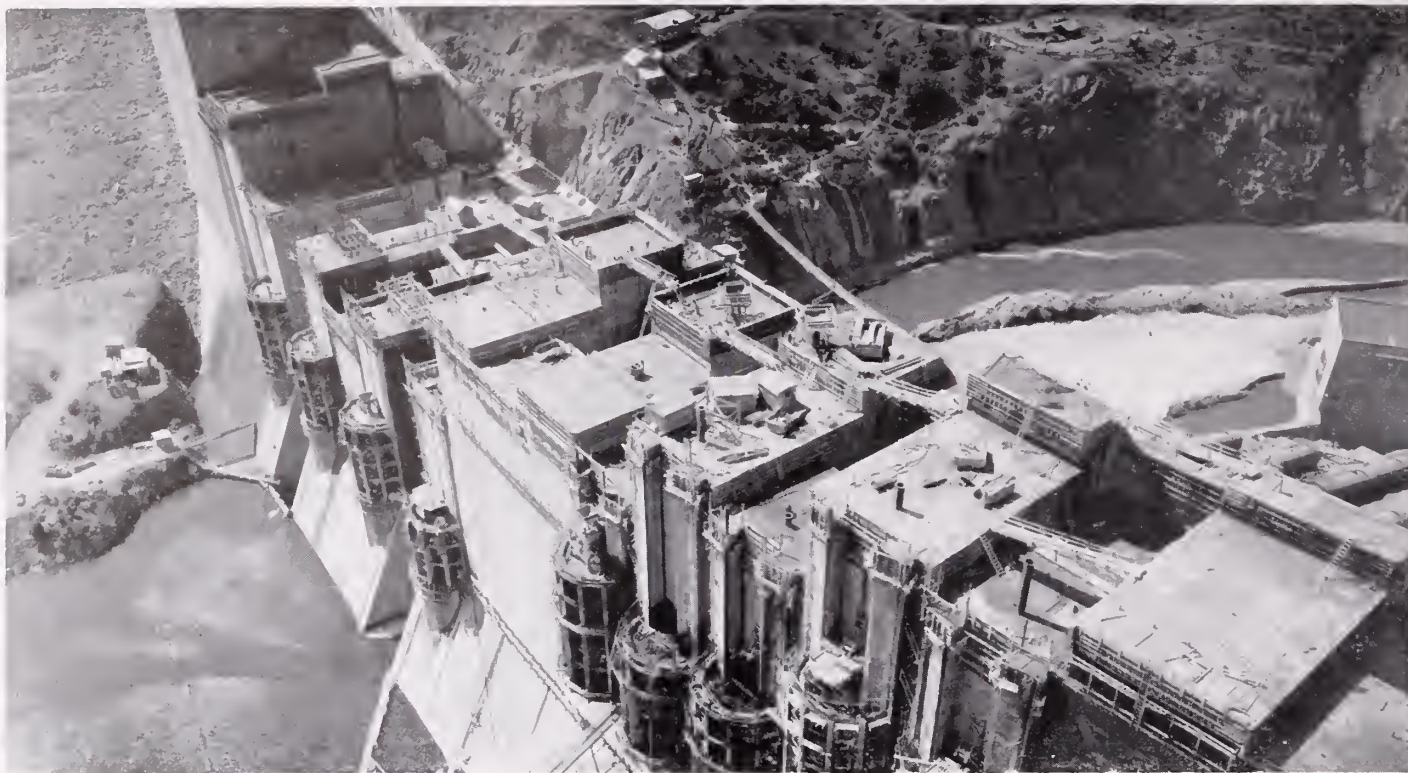
I note in the Ragged Islands game register that from January 15 to 19 in 1912, two guns bagged 272 fowl, including 200 canvasback, 55 widgeon, 12 geese and 5 swan. This was in a freeze which meant hard work and plenty of discomfort. There were no heated blinds in those days.

From the foregoing you will gather that duck shooting in those "good old days," called for real gunners who knew their fowl and possessed "guts," patience and perseverance. As for the cost, haven't I shown you that in such shooting, when it came to dollars, "De duc eat um up?"

The young fellows grinned and one of them said: "It sure did but, by gosh, it certainly was worth it."



Bags like this were unusual even in the "good old days." Experienced hunters were deadly in the days of baiting and live decoys, however, and helped reduce the waterfowl population.



Bureau of Reclamation — Photo by Glaha

There is a need for reclamation but it is a technological frontier in the husbandry of land, much less spectacular than concrete monuments to engineering genius but our best insurance for the future.

Dams, Drainage, and Some Facts of Life

By DURWARD L. ALLEN

THE huge increase of the taxpayer's burden since World War II has been little cause for satisfaction, other than the measure of national security we have purchased. But one attendant benefit may be a public awakening on the need to re-examine major items in the federal budget.

In particular, we have perhaps grown too accustomed to expenditures in hundreds of millions for great reclamation plans to open up new lands for agriculture and industry. The demands of these costly ventures have become so obviously insatiable that there is increased questioning of their propriety and ultimate worth. They are presented to us as the inspired vision of bold and progressive men. It could be prudence to suspect that when the cost of failure is a public charge, men of vision may become visionary and the bold foolhardy.

In essence, the vast reclamation programs are a tax levy on naturally productive areas and efficiently operating business for a hazardous speculation in regions submar-

ginal for both farming and commercial enterprise. This is nothing today's public can afford to accept without careful scrutiny, since the debt will be incurred by people far removed from the sites of reservoirs, power stations, and watered lands. Citizens of the entire nation are being asked to contribute during their own lifetimes and to place a lien on the incomes of their grandchildren.

The spending of billions in a limited region naturally enlists a solid front of local support. Inevitably, it will bring a local, if temporary, prosperity. But what is given is also taken away, and people of eastern states must weigh the value of more dams on western rivers against their own needs for better schools and other services to their increasing populations.

The question of reclaiming new lands is commonly represented as a need for business opportunity. It is a part of the "expanding economy" that a steadily building population of Americans has come to look upon as a permanent feature of our own way of life. The time is now close upon us when we will have occupied our naturally productive lands and when, in terms of area, there will be an end to further expansion at reasonable cost. To insist on going ahead by adding unreasonable costs to the public debt is no permanent solution to anything, since this, too, must reach an ultimate limit.

The resources of this continent are the base on which our population will expand and survive. The develop-

(With a bitter fight raging in Congress over the multi-billion dollar Colorado Storage Project and Echo Park Dam in Dinosaur National Monument, and with nation's remaining waterfowl marshes threatened by drainage schemes, Professor Allen here tells why proposed vast reclamation programs are visionary and foolhardy and a tax levy on naturally productive areas. A resource ecologist at Purdue University, Professor Allen is former research chief of the U. S. Fish and Wildlife Service. He is the author of "Our Wildlife Legacy," published by Funk and Wagnalls — Ed.)

ment and use of this natural wealth should involve some consideration of the biology of man himself. The population biologist knows well that nothing grows from nothing. It is true of animals in natural environments, and it is true of human beings as well, that maximum numbers bring reduced comfort and welfare for the individual. Even in our industrial society, after an optimum level is attained, increased numbers mean more competition, which requires that more things be divided more ways.

We are in the midst of a population increase, and no one can predict with certainty where it will end. There is little question that we have reached the level where additions to our numbers are more of a problem than an undiluted benefit. Since this date a year ago, we have acquired 2.8 million more Americans, and this upward trend may well continue beyond the ultimate point of national strength and welfare.

In the interest of a high living standard, it would seem reasonable to allow our numbers to seek their level on the basis of habitable land we now have. Considering the population pressures which are likely to be with us, even before the end of this century, we probably would be wise to preserve our living space and retain an undeveloped reserve rather than pay a large premium in public money to reclaim marginal lands. Eventually, these areas will be significant in adding to the total number of people within the United States.

These concepts are contrary to our habits of thought, because population biology is no part of our usual training. We are conditioned otherwise, in being for several centuries a few people in a vast continent which we have been in the process of occupying and filling up.



In the past millions have been spent to drain sub-marginal land that is practically useless for the production of agricultural crops.

At present, we are in a tension period when it must be decided whether we will go on demanding expansion at any and all cost. We must decide also what our open spaces are worth to us and whether all their assets must be commercialized for quick liquidation to the detriment of long-term public values. Parks, forests, wildlife refuges, and other lands belonging to the entire nation are feeling the pressure of those who conceive that land not overrun with people is "idle" and worthless.

That concept is refuted by the 88 million recreational visits paid by American citizens to their national parks and forests last year. These visits have doubled in nine years and they bespeak the need for more such public properties, rather than less. The value of our "idle" wetlands is attested by the 14 million hunters who bought licenses in 1954 and to whom the marshes are yielding the annual harvest of waterfowl that has fostered one of our great sporting traditions.

The pursuit of our "development" complex would allocate billions to the irrigation of a few hundred thousand acres of desert and pay public tax money for the destruction of our marshes—while tolerating the ruination of millions of productive acres through misuse.

Farms are being washed away for want of provident farming, and plowed-up grasslands are blowing away under the stimulus of a subsidy on wheat. Overgrazed watersheds are sliding into the valleys in flash floods, and western topsoil is building up steadily in the reservoirs we already have.

There is a reclamation frontier, and its demands are imperative. But it is a technological frontier in the husbandry of land. A few millions wisely spent could mean annual progress and the steady building of solid value in all parts of the nation. It would be less spectacular than concrete monuments to engineering genius, but it would bring into being a social maturity which we now seem to lack, and it would be our best insurance for the future.



The value of our "idle" wetlands is attested to by the 14 million hunters who bought licenses in 1954 and to whom the marshes are yielding the annual harvest of waterfowl.

SPORTSMANSHIP

By I. T. QUINN

Executive Director

EVERYWHERE you go, you hear hunters and fishermen referred to as sportsmen. Are they? Not all of them are. Webster defines the word "sportsman" as "One who in sports is fair and generous; one who has recourse to nothing illegitimate; a good loser and a graceful winner."

How many hunters and fishermen of your acquaintance are unfair to their fellow hunters and fishermen? Did you ever shoot quail with anyone who was a good claimer? If you have done much hunting, you have. Did you ever fish with anyone who, because he was not catching a lot of fish, complained that they all had been caught and that the game commission was not doing its duty?

Did you ever think that because the brace of dogs over which you were hunting on a particular day were not finding birds that it might be (a) because they were not first class bird dogs, (b) because the dogs were handicapped by reason of the fact they had never hunted the area before, (c) because weather conditions were not conducive to an adequate diffusion of bird scent while they were feeding, (d) because the type of farming in the fields when you were hunting had driven the birds out of the fields and into the woods, (e) because the bird environment had completely changed since you last hunted these fields, (f) because the dogs were not being properly handled, (g) because just maybe it was an "off day" or one of many other untoward things that had happened?

Perhaps your hunting companion said that if the game commission lived up to its obligation it would have planted brood stock in those fields, never thinking for a moment that if the native quail could not survive there, neither could pen raised birds.

A hunting or fishing license is not necessarily a badge of sportsmanship. A license to hunt or fish is not a right; it is a privilege. A license does not give anyone the right to go upon the lands of another to hunt or to fish in another's private waters. There are those who say that if the state requires one to purchase a hunting or fishing license that the state should furnish such person a place to hunt and fish. By the same token, if the state requires you to buy a marriage license, then the state should by that same token furnish the bride—eh?

If a hunter or fisherman is out mainly to put meat on the table, then I do not think he is a sportsman—rather, he is just another meat hunter. If a hunter takes two or more deer in one season where the law says one shall be the limit, he is a meat hunter, a violator and not a sportsman.

A membership card in a game and fish club, in an Izaak Walton chapter or the Wildlife Federation, is not a guarantee of sportsmanship. It is what you are and not who you are that counts.

I think we are all agreed that a person who hunts or fishes out of season is not a sportsman—he is unfair to you and the game he hunts. He's the type that should be "put under the jail."

I do not believe the out-of-season hunter or fisherman, or one who takes a larger bag of game or creel of fish, or one who never helps to perpetuate game and fish can possibly enjoy hunting and fishing as much as the fellow who conforms to the laws and regulations and who, when he has the opportunity, tries to create a better environment for wildlife.

Won't you take some hunter this season and make a sportsman out of him? I believe he will appreciate it in the days that lie ahead.

A FEW RULES OF SPORTSMANSHIP

1. Always be a considerate sportsman. Treat others as you yourself wish to be treated.
2. Practice SAFETY at all times. The true sportsman is always a safety-conscious sportsman.
3. Respect NATURE and all things living. When you kill, kill cleanly and without suffering.
4. Practice the conservation code that you preach.
5. Respect property rights and the law and urge others to do likewise.
6. Share wildlife blessings and share them alike.
7. Help protect and perpetuate our great outdoor heritage.
8. Instill in others the high ideals of sportsmanship.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

COMMISSION ADOPTS NEW FISH REGULATIONS. At its meeting on Friday, November 4, the Commission adopted certain proposed changes in the fishing regulations for the coming season which had originally been brought before the Commission when it met on October 7. Bass may be taken from waters west of the Blue Ridge June 20-April 30 inclusive, except that bass may be taken from New River and James River at any time. Year-around fishing for wall-eyed or pike perch will be lawful in New River. The size limit on bass was eliminated. The creel limit for large and smallmouth bass, black bass and spotted bass was set at 8 a day in the aggregate and, for white bass, 25 a day. Other amendments to regulations were concerned with certain specifications in regard to localities for trout fishing with artificial lures only and a prohibition against the use of more than one hook attached to a single line in trout streams.

NINTH ANNUAL WILDLIFE ESSAY CONTEST ENTRIES. Several hundred entry cards have already been received at the Commission from schools all over Virginia which wish to enroll their students in the ninth annual wildlife essay contest, sponsored jointly by the Commission and the Virginia Division, Izaak Walton League of America. The theme of the contest this year is "What I Can Do To Help Wildlife In Virginia." Closing date will be February 29, 1956. A total of \$1,400 in prizes is being offered, including a \$400 college scholarship for the best essay written by a senior in high school. There will be seven cash prizes in each grade from 5 through 12, with \$50 for first place, \$25 for second, \$15 for third, two honorable mention awards of \$10 each and two special mention awards of \$5 each.

FISH PLANTING IN PUBLIC WATERS NEARLY FINISHED. G. W. Buller, chief of the Fish Division of the Commission, announces that the planting of smallmouth and rock bass from the hatcheries was completed according to schedule and that the planting of largemouth bass, bluegill bream and crappie was begun in the early part of November. "Better than last year," was Buller's comment on the current planting program.

NEW RESOURCE BOOKLET ON THE PRESS. J. J. Shomon, chief of the Education Division of the Commission, reports that the new resource booklet of the Virginia Resource Use Education Council is on the press and will be available before long. Entitled "A Look at Virginia's Natural Resources"--soil, water, forests, wildlife, fisheries and minerals--the booklet has been in preparation for the last two years by the various state organizations concerned with the conservation of our resources. The booklet will be printed in two colors and its text will be aimed especially at the seventh grade level in the schools.

VIRGINIA BOWHUNTING INCREASING IN POPULARITY. With the second statewide pre-season for hunting with bow and arrow, November 1-10, and the addition of special bowhunting areas such as the state forest lands in Cumberland, Buckingham and Prince Edward counties, and the Dolly Ann Game Breeding Area on the Warm Spring and Fore Mountains in Alleghany County, on the George Washington National Forest, great impetus has been given to the fast-growing sport of bowhunting. Twenty-one deer were taken on Hog Island during the special three-week bowhunt there. More have been taken on the National Forest lands already by bow and arrow than in previous years.



A part of the outdoors was transformed for the background of this year's exhibit. Native wild animals added liveliness to the display.



Above: two fawns still in their spotted coats. There are more than 150,000 deer in Virginia at the present time. Below: Young lady is fascinated by a feeding woodchuck.



Department of Highways photo by H. J. Nes. Not "Smokey," but this bear cub was the center of attraction for young and old alike. The bear population is on the increase in the state.

GAME COMMISSION'S EXHIBIT

at

The Atlantic Rural Exposition

STATE FAIR OF VIRGINIA

This Year's Theme was: "Conservation is wise, use without abuse."

Replica of an old mill site, with flumes operating and a stocked fish pond, was the setting for this year's exhibit.

Against this rustic background a number of native wild animals added liveliness and appeal to the display which drew steady crowds during the fair which lasted from September 23 to October 1. Game wardens, conservation officers and members of the Education Division staff were on hand at all times to answer the many questions of visitors and to explain the work of the Commission. Here in pictures are some of the highlights of the exhibit.

Commission photos by Kesteloo



This raccoon family from eastern Virginia was always playful. Raccoons in the Tidewater are numerous and even in the mountains are on the increase.



A replica of an old grist mill (copied from an original on the Skyline Drive) had eye appeal and helped aerate the water in the fish pool.

WHY SAVE OUR MARSHLANDS?

By BYRON JOHNSON



Furbearers, fish, and wildlife are a natural wealth found in our marshlands. This is a typical marsh muskrat house.

THEY were a thrilling sight when I first spied them. A sharp, picturesque, v-shaped flight of mallards were winging their way southward on their annual migration to the warmer regions. Presently their leader guided them in a declining circle, and setting their wings they descended to the quiet secluded marshland below. This would be their haven of rest and protection for the night as they prepared to continue their journey on the next morning. With light sparkling splashes they dipped their tails into the water and then settled down to swim in the pleasant grassy marsh with brown-stalked cattails surrounding them. As they settled themselves, a dark-brown muskrat silently glided through the water near them on his way in search of food. After dark he would soon be joined by others of his kind. The plaintive whistle of a bobwhite came from the heavily covered margin of the marsh. Small song birds flitted here and there catching the numerous mosquitoes and other insects over the water. Then a splash and widening rings in the water announced the activity of fish as they made startling leaps after insects. Seemingly quiet and unpretentious, this marsh was in reality a well-organized community with hundreds of inhabitants who were engaged in a constant "struggle for survival." This was nature at its best. It is symbolic of the thousands of fresh water and coastal salt marshes spread throughout the country. These marshes are a natural resource which needs to be looked after and conserved.

Marshes are more than wildlife and nature habitats. By storing the excess water which drains off the surrounding land, it insures an adequate underground

water level. By slowing down this run-off and by fostering cover plant growth on its margin, the marsh promotes soil conservation. This also plays an integral part in the vast system of flood control. Only by each region controlling its own excess can large devastating floods be stopped. Marshlands provide a much needed check on sudden extra water surpluses.

The conservation of water is closely related to the fate of the migratory waterfowl, ducks, geese, and swans, as well as many marsh-inhabiting birds such as coots, rails, shorebirds, and many non-game birds. They are part of nature. Their existence depends on the adequacy of the water habitats.

Marshlands provide recreational regions for many people. How many countless young boys have begun their independent lives by taking an old cane pole and a can of worms and striking out for the "old fishing hole." Here they sit for hours and watch and learn the lessons of nature which make them true sportsmen for the rest of their lives. Duck hunting, trapping, nature study and many other types of recreation can be enjoyed in the marsh. It is a place where man is close to nature and to God.

Great wealth is also harbored by the marshlands. In the marsh the muskrat leads in fur value. In fact it brings in the greatest financial return of any single-fur-bearer in the United States. Others—the beaver, the otter, and the mink—are also inhabitants. With proper management marshes will produce more value for investment than will many farm crops. Fur-bearers, fish, and wildlife are a natural wealth which must be preserved.

Yet, with all these advantages derived from marshes there are many who would have them drained, filled, or destroyed in some other way. Thinking that these marshes are eye sores or only mosquito breeding grounds, some people can see no value in leaving them. Agriculture interests have also advocated and brought about drainage to secure new farming areas. Of the 127,000,000 acres of wetlands in the United States 37,000,000 acres have been drained and 20,000,000 are suitable for draining. That leaves about 70,000,000 acres which are best suited to serve for wildlife and nature development. Even on sites where drainage is necessary, it is possible to plan carefully to remove the surplus waters and still maintain a suitable habitat for wildlife. Unfortunately studies in Delaware and New Jersey, for instance, show that reckless drainage has not only materially changed the plant communities of the marshlands but has decreased by from ten to ninety-five percent the total wildlife production. It is impossible to generalize on the best use of marshes. Depending on local conditions it is desirable to drain only marshes which are potentially permanent agricultural lands, located so they can be economically and adequately drained.

Seldom is the intimate and bustling life of nature pictured as a part of the marshland problem. Wildlife haunts are too rapidly vanishing from our industrialized world. Where can man then go to commune with nature? What will be the fate of our vanishing marshes? Will they continue to be the haven of wildlife, a peaceful communion with nature for sportsmen and nature lovers, or will they be sacrificed to the selfish whims of minority pressure groups?

One chill evening as the sun was disappearing over the horizon and flashing its brilliant colors, I followed the flight of a majestic wedge of southward-bound mallards. As has been their custom for years they began to descend on the marsh where they stopped when passing this vicinity. As they set their wings, they suddenly flared! Where was the welcoming marsh they had expected?



The raccoon—camman in Virginia's marshlands. Food is plentiful here and the living is easy.



The muskrat, our most valuable furbearer, is at home in the marshes of Virginia's Tidewater.

Could this dry, hard barren land be their accommodations for the night? The protecting rushes and cattails were gone. No muskrats were to be seen. No croaking frogs or whistling bobwhites greeted them. No longer was this the haven of nature it had once been. Their marsh had been drained!

Nature abhors a vacuum where it cannot exist. Marshes must continue to be natural homes. A marsh can be compared to a dwelling. If the inhabitants die or move away, others can move in. If marshes are destroyed, no wildlife will live there. Marshes are implements of practical conservation. Save them!

(Editor's Note: This is the first prize entry in the Senior high school division of the National Wildlife Federation's 1955 national essay contest.)

HUNTERS!

Do you want to help your Game Commission make better recommendations for your future hunting pleasure? Then be sure to tag your deer or turkey promptly at a local checking station.

Remember, the numbers checked, the sex and age of the game, have everything to do with our knowledge of the status of game populations and the resulting decisions on next year's seasons and bag limits.

Be sure that the station operator gets the following information on your tag:

- 1—Deer—be sure that the sex is correct
- 2—Bear—be sure that the sex is correct
- 3—Turkey—get the bird accurately weighed (*to the ounce*) and leave a *breast feather* attached to the tag.



Commission photo by Kesteloo

The bobwhite quail and the cottontail rabbit are the two most popular farm game species in Virginia.

HUNTING in VIRGINIA

By J. J. SHOMON

EVERY hunting season the state Game Commission is deluged with requests from hunters asking the inevitable question: *Where* and *what* can I hunt in Virginia. As a partial answer to such queries, your *Virginia Wildlife* editor has attempted to piece together some information that might be useful to the hunter. It is not complete enough, of course, and it is general. There can be no other. Each hunter must make his own contacts, his own arrangements. All that can be stated here is *what* generally can be expected.

To accurately evaluate hunting opportunities in the Old Dominion one must look upon the state as three great geographic subdivisions rolled into one. These physical provinces include the coastal plain, the Piedmont and the Appalachian Mountain regions.

The coastal plain is known as the Tidewater country and occupies roughly one quarter of the state. It has slow-moving streams and deep channels. Elevations are low, rising to approximately 200 feet above sea level. The Piedmont plateau, between the Tidewater and the mountains, is almost twice the area of the coastal plain, and ranges from 40 to 175 to over 1,000 feet. The Appalachian Mountain area extends westward from the Blue Ridge to the West Virginia boundary.

Tidewater Virginia is by far the most prolific wildlife area of the state. Here Chesapeake Bay and the many rivers and estuaries provide a vertiable paradise for the modern outdoorsman. One of the best-known areas for gunners is Back Bay.

Since the memorable morning in 1607 when John Smith first spotted the greenery of Virginia, Back Bay has become famous for its canvasbacks, black ducks and

coots. Although the ducks are fewer today and the waters more turbid, the waterfowl still come down every November and make this tidewater country their winter feeding ground. Recently 15,000 greater snow geese, a protected species, covered one section of Back Bay and made a spectacle for photographers.

Northward, from Back Bay and Virginia Beach, across Chesapeake Bay, is Cape Charles and its attendant 80 miles of Eastern Shore made famous over the years for its waterfowl shooting. Every fall thousands of duck hunters gather in the tall grass at such picturesque spots as Oyster, Wachapreague, Accomac and Chincoteague to get some good shooting. Most common duck is the black duck, with lesser scaups, pintails, redheads, teals and canvasbacks in good numbers. Canada and greater snow geese are by far the most common large waterfowl seen here, with American brants putting in an occasional appearance.

Here, too, is 200 square miles of salt marsh land which is the home of the clapper rail. When the tide is high and the moon is a full golden pancake, the hunter gets in some excellent clapper rail shooting.

One cannot write about Tidewater Virginia without mentioning the Great Dismal Swamp. Here is a singular swampland that has a subtropical charm all its own. The area affords some of the best deer and bear hunting in Virginia. The great swampland sprawls over 750 square miles of forestland in southern Virginia and northeastern North Carolina. Most of the land today is in private ownership, its vast acres stripped of the best timber or burned over. Most of the hunting is done through clubs who have permission to hunt in the area.

Bear and deer hunting in the swamp is done mostly with dogs. Hunters take their stands along old logging roads and high spots while dogs undertake to drive the quarry past them. Another method employed by natives in bear hunting is to paddle along the watercourses and attempt to come upon old bruin by surprise.

Deer hunting is becoming increasingly popular in the Tidewater as deer increase. The more wooded counties like Charles City, Essex, King William, Prince George, New Kent now afford good shooting. One of the highest deer kills each year is in Sussex County, where good cover and abundant food have always supported a heavy deer population.

Hunting in the general Piedmont region ranges from fair to excellent. Most popular gunning in this section are quail shooting and fox hunting. Riding to the hounds is here a traditional sport ranging back to colonial times. Some of the country's most noted fox-hunting clubs are located in the central Piedmont. The fox is considered a game animal in Virginia, and with minor exceptions can be hunted with dogs in most counties 12 months of the year.

Quail populations appear to be holding their own except for certain sections in southwest Virginia where dairying and cattle raising have destroyed much quail habitat. Best bird shooting is found in counties in the central Piedmont where there is good food and cover. Many Virginia bobwhite hunters are almost as much interested in the fine setters and pointers they breed and train as they are in the hunting of the birds themselves. Some of the most colorful field trials are to be found in this region.

Wild turkeys are hunted in the majority of Virginia's counties, although nowhere are the birds very plentiful. The 1954-1955 season's kill amounted to 2,027 birds. Still-hunting or stalking is the most popular form of hunting, although dogs are frequently used to flush the birds.

Probably Virginia's greatest outdoor wealth lies in her western mountains, where 11½ million acres of public land in two national forests and one national park

provide the recreation seeker with everything from deer and bear hunting to gorgeous mountain scenery. While 193,000-acre Shenandoah National Park, which straddles the picturesque Blue Ridge for 105 miles, is not open to hunting, its many recreational assets more than make up what is lost to the gunner. Furthermore, this gigantic wildlife sanctuary is doing much to restock the surrounding foothills with wildlife.

The state's largest public hunting lands lie within the boundaries of two national forests, the George Washington and the Thomas Jefferson. Bears are holding their own, and deer, grouse and wild turkey—thanks to an intelligent co-operative agreement between the game commission and the U. S. Forest Service—are coming back. Ten years ago the largest deer restocking program in the United States got under way in Virginia's mountains. Today, after two decades of forest-game management under the so-called Virginia Plan, the wildlife of the Blue Ridge and Alleghany mountains is slowly coming back. When the plan went into effect there was little hunting to be had in the mountain counties. Now deer are widely hunted and everywhere they are increasing.

The Commission of Game and Inland Fisheries, under the leadership of its executive director, I. T. Quinn, is making good progress in building up the Commonwealth's wildlife resources. So farsighted and ambitious is its long-range wildlife restoration program that conservationists are looking to Virginia for some outstanding results. One prominent wildlife administrator recently rated Virginia among the first five states in its wildlife program. Basically, the state's new program calls for more education, stricter law enforcement, and expanding fish program and greatly augmented game restoration activity based upon habitat development.

Summarizing the hunting picture, we might say Virginia is not too bad off. The opportunities are here—but they have to be singled out by the individual. Good hunting places are uncovered slowly and must be nurtured along by courtesy and consideration. The hunter who is a *true* sportsman and a courteous and considerate fellow should always find a place to hunt.



Ducks and geese, although fewer today than at the turn of the century, still furnish sport for many Virginians.



This forest clearing with food and cover is an ideal spot for deer and the ruffed grouse, hunted extensively in the mountain areas.

GUN SAFETY

Your Personal Responsibility

By W. C. KELLNER

EACH year during the hunting season there is a clamor throughout the length and breadth of the state—and nation—for the safe handling of firearms. The Virginia Game Commission, local sportsmen's organizations, other state game departments, the National Rifle Association, gun manufacturers and dealers, are all sponsoring programs with the central theme being to caution hunters in the safe handling of guns. This is as it should be. There is a real need for gun safety. Even if there were no fatal accidents there would be the justification for teaching safety to our young crop of hunters that come along each year. It is good practice to constantly remind even our most seasoned hunters of the hazards of faulty gun handling.

In Virginia the State Game Commission has been making every effort to put the hunter safety message across to the hunting public. Motion picture films on shooting safety have been widely circulated. Thousands of safety posters and pamphlets have been distributed and television, radio, and newspaper audiences have been reminded of the importance of safety.

Just how safe is it to hunt in Virginia? Last year there were 526,927 licensed hunters in the state. Among this army of hunters there were only 10 fatal gun accidents. This is only one casualty for more than 50,000 hunters, which statistically is reassurance to the wives and mothers of our sporting fraternity. As long as we have this many hunters in our fields and woods, accidents are almost certain to happen. It is impossible to eliminate the "human error" factor entirely when so many individuals are involved.

For comparison a look at our traffic fatalities in the state indicate that a licensed driver in Virginia is twelve times as likely to die a sudden death as is a licensed hunter. Here in the state there is only 1 hunting fatality to every 80 highway fatalities. True, the hunting season is more brief and there are more licensed drivers but the point is that hunting is a comparatively safe sport in the "Old Dominion."

We do not know how much our gun safety programs are doing to keep hunting a safe sport. Undoubtedly they

have a tremendous impact in helping to keep the accident rate low. A hunter in Virginia has statistical reassurance that the possibility of his ever becoming a customer for the undertaker while in pursuit of his favorite game is slight. However, as long as one single hunter is a victim of his or another hunter's gun it is imperative that all hunters feel a deep personal responsibility for gun safety.

Every hunter should know and practice the rules of gun safety. The important rule is to treat every gun as if it were loaded. A gunner should be so familiar with his gun that the mechanics of handling it will not divert his attention from *constantly* thinking safety. Shooting at a sound, or movement, or object without knowing what it is beyond any shadow of a doubt is inexcusable. Gun accident case histories show this to be one major cause of hunting tragedies. *Carelessness* in some form is the basic reason for most of our gunning accidents.

Some states have passed laws placing the responsibility for shooting accidents squarely on the hunter. Wisconsin, Pennsylvania, Maine, Michigan, New York, and Colorado have led the way in pointing out this personal responsibility. Maine possibly has the strictest penalties for injuries that result from careless hunters. Maine's law specifies that anyone who kills or wounds another while on a hunting trip or in pursuit of game shall be punished by up to *10 years imprisonment, \$1,000 fine or both, and upon conviction shall lose his hunting license for life.*

Legislation along this line is a step in the right direction. We can well investigate some good legislation in gun safety in this type of law making here in Virginia. Let's hope that some interested legislator will come up with a bill that will place the responsibility of hunting accidents where it should be—on the careless hunter. Laws will not necessarily eliminate accidents but along with a vigorous education program they can spell out the seriousness of senseless gunning accidents.

Now for some practical suggestions to hunters as to how they can help promote gun safety. First practice shooting during the off season. It will improve your aim



Commission photo by Kesteloo

Don't let a tragic gun accident ruin your hunting trip this year. A little caution will eliminate most hunting accidents.

and strengthen your confidence. You will be more at ease when the hunting season does open. Too many hunters put their guns away at the close of the regular hunting season and leave them until just before another season opens. Familiarity with your gun is a good safety precaution.

Instruct the young hunters in the rudiments of safe gun handling and common sense in hunting. It is certainly a father's responsibility. If you are not a parent, help the youngster next door or down the road. You might save a life.

When hunting with a companion or a hunting party talk safety. A little caution may prevent a tragedy. You will gain the respect and admiration of your fellow sportsmen and encourage them to be more careful.

Last but not most important is the individual moral responsibility connected with hunting. This responsibility begins before there is an accident. It evolves around a hunter's interest in the well being of other hunters and the welfare of their families.

After an accident takes place the grief and heavy conscience of the guilty gunner is a burden that is too much to carry for the rest of a lifetime, all because of a thoughtless moment of carelessness.

Although your chances of becoming a casualty this hunting season are slim, remember it is up to you to see that you or someone else does not have a premature appointment with the mortician and end this hunting season as a vital statistic in the hunting accident report.

"Good luck and safe hunting."

SUMMARIZED HUNTING ACCIDENT REPORT PERIOD - 1950 - 1955

Year	Total No. Accidents	No. Counties Involved	Shotgun	Hi-Powered Rifle	Small Rifle	Fatal	Non-Fatal	Inflicted by		Under 20 Yrs.	Over 20 Yrs.
								Self	Other		
1950-51	19	15	16	1	2	9	10	7	14	7	10
1951-52	27	21	22	4	1	11	16	11	16	11	15
1952-53	12	9	10	1	1	3	9	7	5	7	4
1953-54	31	26	23	4	4	9	22	12	20	13	17
1954-55	15	12	8	2	5	10	5	4	11	8	7
Totals	104		79	12	13	42	62	41	66	46	53



New Book on Birds of Prey

A valuable addition to the field of ornithology has been made by the publication of Alexander Sprunt Jr.'s new book, *North American Birds of Prey*, published by Harper Brothers under the sponsorship of the National Audubon Society.

The book is the only up-to-date treatise on the subject of the birds of prey, including vultures, kites, accipiters, buteos, eagles, owls and the like. Dr. Sprunt describes each bird as it may be seen in its natural habitat, in flight, or in pursuit of prey. The descriptive history is preceded by a detailed summary of the birds' local names, characteristics and recognition, nesting habits and range.

Homesick Mallards

In 1953, 448 mallards were live-trapped by Missouri Conservation Commission biologists and transferred from the Mississippi flyway to Maryland and the Atlantic flyway.

Apparently some of the mallards got homesick for the Mississippi Valley for Missouri biologist Lewis Helm reports that of 35 bands recovered from the transplanted flocks, 33 turned up in the Mississippi flyway and only two returns were made from the Atlantic flyway.

Duck hunters are urged to return any legbands found on bagged ducks to help the study of waterfowl migration habits.

Young Hunter's Thanksgiving Turkey

It will be hard for 12-year-old Glenn E. Fant, Jr. to keep up with his first record as a wild turkey hunter, but he will probably try to match it again this season.

While deer hunting with his father, Lieutenant Colonel Glenn E. Fant, of

Fort Monroe, last Thanksgiving Day, the boy bagged a 16-pound wild tom turkey in Nottoway County. Colonel Fant believes his son may have been the youngest hunter to get a turkey in Virginia last season.

Let's hear from any others who can match or better the feat.



Young Glenn E. Fant, Jr. proudly displays his 16 lb. wild tom turkey.

Visitor from Central America

G. R. Stringer, Superintendent of Produce for the A. & P. Warehouse, called the Game Commission to inquire about a little visitor who had stowed away on a bunch of bananas from the Pacific side of Central America.

The soft-furred little creature with big eyes and a nine-inch tail had a body about the size of a small rat. When brought into the Commission offices in—naturally—a fruit basket and with a bunch of bananas, it was identified as a murine or "mouse" opossum.

These small Central America opossums have a long bare tail and, like our native species, carry their very tiny babies on their backs. However, they do not have the outside pouch

of the North American marsupials. Every once in a while one will slip into the country via a shipment of bananas.

Conservation Workshop Scholarships Sought

The Virginia Resource Use Education Council is seeking the establishment of one or more intensive short training courses in conservation to be offered to Virginia teachers and supervisors at centers of higher education in the Commonwealth. The goal of the workshop plan is to stimulate greater consciousness among teachers of the importance of wise resource use and greater emphasis on the integrated study of conservation in the schools. From this beginning, it is hoped that conservation will eventually become an integral part of the course work in our schools and colleges.

The Resource Use Education Council is an organization of conservation education leaders representing all the state and federal resource agencies. It hopes to establish one or more two and a half week conservation workshops offering special short courses wherever it is feasible and financially possible to have them. Attendance, it is expected, would have to be on a scholarship basis and one hundred dollar scholarships are planned.

Workshops will be established wherever a Virginia university or college will provide a full-time workshop director, at college expense, for 20 or more teachers and where study and housing conditions are suitable. Administration would be under the direction of the university or college, but instruction would come from the various resource agencies concerned. It is the intention of the Council that teachers would receive college credit for this work.

The big factor in the workshop proposal is scholarships. An all-out effort is being made to contract organizations and industry in the hope of obtaining at least 60 scholarships of \$100 each.

Since the Council must know by December 15, 1955, just how much money it has and what commitments can be made, direct contributions rather than pledges should be made by those who wish to help implement the plan. All checks should be made out to "Conservation Workshop Scholarship Fund, Edwin Holm, Treasurer" and should be sent to Mr. Holm at 301 Finance Building, Virginia Division of Planning and Economic Development, Richmond, Virginia. The fund will be continuous. Monies not spent the first year will carry over to the next.

Teachers would be selected by the university or college in close cooperation with a special Council committee set up for that purpose. Additional information about the conservation workshop plan may be obtained from members of the Scholarship Fund Raising committee whose chairman is J. J. Shomon, chief of the Education Division of the Game Commission. Other members, besides Holm, are Dr. I. D. Wilson, of Virginia Polytechnic Institute, and Ed Rodger, of the Virginia Division of Forestry in Charlottesville.

Commission's Better Mousetrap Catches Deer

Believe it or not, an ordinary mousetrap played its part in the Game Commission's program of trapping 40 deer in the North River Refuge for transfer to other localities. The deer trap itself measured about ten feet in length by four in height and 30 inches in width and was made of fairly heavy slatted construction with a free-sliding gate at each end.

When the trap was set, the gates were up. Once a deer ventured inside to taste the yellow sulphur salt used as bait, it came in contact with a tiny but strong nylon thread. Pressure on the thread sprang the mousetrap on top of the box and the action of its spring tripped another and heavier trigger which released the gates and closed the deer inside.

Supervisor Biologist J. E. Thornton, Game Biologist E. V. Richards and Refuge Manager Joseph ("Cam") Huffer worked on the deer trapping as but one item in the many-phased program of wildlife management carried on cooperatively by the Game Commission and the United States Forest Service. Other aspects of the work are marking and developing trails, water holes, food and cover for game, selective cutting of timber, reforestation, road work and patrol.

There were 26 traps set and transfer from trap to mobile trailer was made through a smaller box. The captured deer, mostly does, were released in Amherst and Patrick counties.



Esther Cole, of Norfolk, was the first woman to kill a deer at Blackbeard's Island with bow and arrow and the only woman to kill a deer this year on Hog Island.

Rockingham Sportsmen Active in Conservation Projects

Dr. O. F. Foley, president of the Rockingham Game and Fish Association, sends us word that the local fish rodeo for the small fry—sponsored jointly by the Game and Fish Association and the Rockingham Chapter of the Izaak Walton League of America—was a huge success. Two hundred and eight youngsters participated in the rodeo held at Summer's Pond.

The Game and Fish Association sponsored Conservation Week this year and stimulated an interest in archery in the area. The sportsmen of the county are, says Dr. Foley, favorably impressed with the new game warden, Jennings Whitmer, of Linville.

More Protection for Florida Key Deer

The approval of a public-land order withdrawing 71 acres of public land in Monroe County, Florida, on the lower keys, for use of the Fish and Wildlife Service will be an addition to the National Key Deer Refuge for the protection of the diminutive Key deer which had been threatened with extinction through loss of its natural habitat.

The Key deer, smallest of all American deer species, appears to be a diminutive form of our own Virginia white-tailed deer. An adult Key deer measures only about 38 inches from nose to tail, is 26 to 29 inches tall and weighs about 30 pounds. Present population is about 112 animals. Four years ago there were only an estimated 32.

"Duck Stamp" Sales Drop for Second Year

Last year's downward trend in "duck stamp" sales continued for the fiscal year ending June 30, 1955, says Director of the U. S. Fish and Wildlife Service John L. Farley.

A total of 2,181,566 stamps of the 1954-55 issue was sold to migratory waterfowl hunters, conservationists and philatelists. This represented a drop of 89,864 below last year's total. The peak sales year was 1953 when 2,296,628 stamps were sold.

California headed the 1955 list with sales of 176,881 "duck stamps," followed by Texas, Minnesota, Michigan, Wisconsin and Illinois, each of which reported sales of over 100,000.

Merck Rod and Gun Club Distributes Book Covers

E. H. Shults, of Elkton, has sent us a sample of the conservation book cover distributed to 1000 Rockingham and Page county school children by the Merck Rod and Gun Club. One side of the cover carries the winning poster design of the third annual "Keep Virginia Green" poster contest which was won by Bobby Silverthorn of the Hampton High School, Hampton, Virginia. Our old friend, Smokey the Bear, is pictured with a pledge on the other side.



Report on Second Hog Island Bowhunt

Hassel Taylor, Manager of the Hog Island State Waterfowl Refuge, reports that 20 deer have been taken with bow and arrow during the second special archery season on deer. Thirty-three deer were taken during the first hunt which was held last year. The special season is a means of controlling the deer population of the 2200-acre island which would otherwise make serious inroads on the waterfowl feeding grounds maintained by the Commission of Game and Inland Fisheries.

James C. Strickland, veteran bowhunter from Portsmouth, reported the first kill on Monday with a young buck deer. Arch and Esther Cole, of Norfolk, the only successful husband and wife team during the first week, took a doe and a buck respectively on the third and fourth days.

Lucky hunters besides Strickland on the first day included Donald Ellner, of Norfolk, Joseph A. Parker, of Portsmouth, Norman A. Bradshaw, of Suffolk, Robert Smith, of Buena Vista, Burd McGinnis, of Blacksburg, Orville Rhea, of Pennington Gap, and W. L. Sullivan, of Hampton.

One buck and two does were taken on Tuesday by John Nichols, of Pennington Gap, A. A. Zybkus, of Hampton, and A. J. Page, of Princess Anne. Besides Cole, T. E. Bangl, of Warwick, and F. McCullar, of Alexandria, were successful on the third day. Gentry S. Ray was the only hunter to bring in a deer on Friday and all the hunters drew a blank on Saturday of the first week. Only one raccoon was reported in.

There were three six-day periods of hunting by permit only. Refuge Manager Taylor and Game Technicians Charles Gilchrist and Stuart Davey checked the Hog Island deer for further information on Virginia's deer herds. Age, sex, weight, antler

development and general condition of the deer killed in different parts of the state give clues to future game management programs of the Game Commission.

The Hog Island special season on deer helps reduce depredation on duck and goose foods planted on the refuge to feed the large concentrations of migratory game birds that winter on the refuge in the James River.



Deformed pickerel caught by C. W. Wood. Apparently the deformity did not interfere with his quest for food since he struck savagely and was apparently in good health.

Virginia Wildlife Federation Meets

The fourth annual convention of the Virginia Wildlife Federation was held at the Old Coach Inn, Fairfax, Virginia, October 8 and 9. Over 30 clubs were represented at the well-planned and well-attended meeting with a full and lively program arranged by the president, Floyd Yates of Powhatan and Bill Newsome, executive secretary from Norfolk.

Host clubs were: Fairfax Wildlife Club, Arlington; Rod and Gun Club; Arlington-Fairfax-Alexandria Archers; Outdoorsman Rod and Gun Club, Arlington; and Arlington Chapter, Virginia Society of Ornithology.

The program of excellent speakers at the banquet began with an address of welcome by Dr. Rowland McCiamrock, regional director of the National Wildlife Federation. He was followed on the program by Roscoe Davis,

chairman of the Kentucky Department of Fish and Wildlife Resources; Ed Adams, director of the Kentucky division of conservation education; the Honorable Watkins M. Abbitt, member of Congress from the Fourth Virginia Congressional District.

I. T. Quinn, executive director of the Virginia Commission of Game and Inland Fisheries, addressed the convention during its business session. Stewart M. Brandborg, assistant conservation director of the National Wildlife Federation also spoke during the morning meeting.

Max Carpenter Shows Film to Archery Group

Special Services Officer Max Carpenter showed Game Commission films at the annual meeting of the Augusta Archers in Stuarts Draft which was attended by most of the 99 members of this largest archery club in the state.

Organized in 1952, the Augusta Archers have been very active ever since and conduct frequent tournaments at the range near the Woodrow Wilson Educational Center. The state field archery tournament was held there last spring.

Officers elected at this meeting were: president, Jesse Beam, Stuarts Draft; vice president, C. J. Woods, Waynesboro; treasurer, Bill Hill, Staunton; and secretary, Mrs. Jennie Mae Mace, Staunton.

Hill Celebrates 30th Year As Game Warden

Julian Hill, Richmond city game warden for the last 19 years, celebrated his 30th year as game warden on October 27. He was appointed under Colonel McDonald Lee when the Commission of Game and Inland Fisheries still had its old name of Department of Game and Inland Fisheries.



Enter the 9th

Annual Wildlife Essay Contest NOW!

SUBJECT: What I can do to help wildlife in Virginia.

SPONSORED BY: The Virginia Commission of Game and Inland Fisheries and the Virginia Division of the Izaak Walton League of America.

DATE: OCTOBER 1, 1955, to FEBRUARY 28, 1956.

PRIZES

One 12th grade, college scholarship.....	\$ 400
Eight grand prize awards, \$50 each, one for each grade, totaling.....	\$ 400
Eight second prizes, \$25 each, one for each grade, totaling.....	\$ 200
Eight third prizes, \$15 each, one for each grade, totaling.....	\$ 120
Sixteen honorable mention prizes, \$10 each, two for each grade, totaling.....	\$ 160
Sixteen special mention prizes, \$5 each, two for each grade, totaling.....	\$ 80
One school prize.....	\$ 40
Grand total	\$1,400

There will be seven prizes in each of the eight competing grades. Scholarship winner, grand prize winners and winning school representatives will come to Richmond as guests of the sponsors to receive their awards. Others will be given awards in the schools.

Two hundred certificates of merit also will be awarded in addition to the money grand prizes.

CONTEST RULES

1. Students from all Virginia Schools, grades 5-12 inclusive, are eligible.
2. Essays must be submitted through the schools participating. Schools to be eligible must send in an official entry card provided for the purpose.
3. Each essay submitted must bear the following information in the upper right hand corner: name, sex, age, grade, address, school, county, teacher. All high school seniors should give the name of the college or university you would like to attend and the course of study you are most interested in following.
4. Grand prize awards (\$50 awards only) cannot be given to winners two years in succession. Also, Commission employees and their families are not eligible.
5. Scholarship award good only in Virginia colleges and universities unless course work is not offered. Award to go to top high school senior winner or next alternate.
6. Award to school to be made on basis of quantity and quality of essays submitted.
7. Final judging will be done by a panel of three judges—one from each sponsoring organization and one from the State Board of Education. Teachers are urged to indicate their choice of best essays, but to send in *all* their essays.
8. All essays **MUST** be mailed first class prepaid, to the Commission of Game and Inland Fisheries, Box 1642, Richmond 13, Virginia. Essays must be mailed and postmarked not later than February 29, 1956.

Wildlife Questions and Answers

Ques.: I killed a deer on Hog Island during the special season for archers in October. Will it be permissible for me to kill another deer at Big Levels?

Ans.: No, it will not be legal for you to kill another deer this season anywhere in the state except in a county which has a bag limit of two deer a season. If you killed your first deer in a county with a one-deer limit, you could then have killed another deer in one of the counties where it is legal to kill two deer, but it cannot be done the other way around. You can, however kill another deer in a county with a two-deer bag limit.

Ques.: What is a "Cape Sheep?"

Ans.: The albatross used to be referred to as "Cape Sheep" because sailors sometimes used their large skins as rugs.

Ques.: Is it unlawful to train dogs without a hunting license?

Ans.: You may exercise your dogs at any time provided the dogs are not in actual pursuit of or capturing any wild game or furbearing animals. If they are in actual pursuit, that is hunting and it must be done in a lawful manner, with a license, conforming to season, bag limits and any other stipulated regulations.

Ques.: Is there an open season on otter in Virginia?

Ans.: There is no open season for hunting otter, but they may be trapped from December 15 to February 28.

Ques.: Are mosquito fish a desirable species? Can they be used as bait?

Ans.: The mosquito fish, *Gambusia affinis*, is held in high esteem by the Public Health Service because they feed almost exclusively on mosquito larvae when they are available. If no mosquito larvae are present they will feed on any tiny plankton organism. As you have probably observed, they are primarily surface feeders. This species is the only native fish that bears its young alive and thus has no special spawning requirements. It would appear that their small size would preclude their use as bass bait, but undoubtedly they would be adequate for crappie. It might be a good idea to bait up and check for hardness. This fish never becomes a problem and can be recommended highly.

Ques.: Please tell me on what animals the state of Virginia offers bounties.

Ans.: The state of Virginia does not pay a bounty on any wild bird or wild animal. However, some bounties are paid by local Boards of Supervisors and the Clerk of the Court in your county can probably advise you if they are being paid in your county.



"Don't swallow me or you will get a frog in your throat."

Ques.: There is a light brown flying insect, a little larger than a house fly, though flatter, which I have found on hawks, owls, turkeys, and grouse, but never on ducks and geese. I have always understood that this was a type of louse. Can you tell me if this is a louse, if it will bite or sting, and if they are found on any other birds in Virginia?

Ans.: The insect you describe is probably a hippoboscoid. The hippoboscidae make up a family of blood-sucking two-winged flies parasitic on birds and mammals. The so-called horse tick, bird tick and sheep tick are of this family, but are not related to the true ticks. Ducks and geese, being in the water so much are not so likely to have them as are other birds.

Ques.: What kind of a squirrel is a cat squirrel?

Ans. On the Eastern Shore, where a bluish-gray subspecies occurs, the fox squirrel is called "gray squirrel" and the gray squirrel is referred to as "cat squirrel."

Ques.: Is it true that the male seahorse carries the eggs rather than the female? Are there any seahorses in Virginia waters?

Ans.: Yes, it is true that the male seahorse carries the eggs. He also supplies the young with oxygen through his blood stream. Eggs stay in a pouch on his abdomen for 40 to 50 days. He expels them as seacolts ready to swim. There are seahorses in Virginia waters.

Ques.: Is there any state in which alligators are hunted with bow and arrow?

Ans.: Yes, alligators are killed by Texas bowhunters and probably in some of the other southern states in which they occur.

Ques.: Is there any other animal in North America which has a pouch like an opossum?

Ans.: No, the opossum is the only one with this marsupial pouch. It belongs to the order of pouched mammals called Marsupialia which is most abundant in Australia and includes such forms as the kangaroo, koala bear and Tasmanian wolf.

Ques.: Where can I secure information about preparing mammal study specimens?

Ans.: The American Museum of Natural History, New York, has prepared a booklet on the preparation of mammal study skins which is available at a nominal cost. Along with the skin, the skull should be saved since it is important in identification. The specimen should be given a number and the same number should be noted on both the skull and specimen tags so that the two cannot become separated.

Ques.: Is it true that young wood ducks can climb?

Ans.: Yes, young wood ducks are well equipped for climbing when they hatch, since they have extremely sharp, pin-pointed, hooked claws and with hooked nails at the ends of their bills. They are so expert that, when confined in a box or keg, they have been known to go up the perpendicular sides—like flies on a wall—to get out.

Ques.: Please tell me how to identify and where to watch out for the deadly black widow spider.

Ans.: The black widow, *Latrodectus mactans*, is a coal-black spider marked with red or yellow or both, and shaped like an hour-glass on the ventral aspect of the abdomen. It is found under stones and pieces of wood on the ground, about stumps, in holes in the earth and near outbuildings. It spins an irregular coarse web. Though it is venomous, deaths from its bites are rare.

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